

**BUCKET TYPE ION SOURCE DEVICE**

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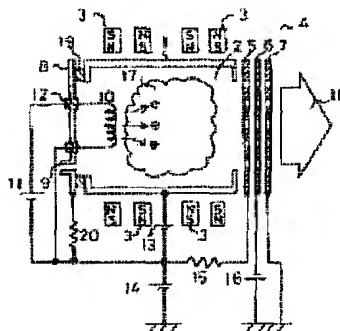
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**Abstract of JP 5198268 (A)**

**PURPOSE:** To extend the service life of a thermal filament by preventing the service life of an ion source device from decreasing with spatter on the lid plate thereof due to ions in plasma, and further preventing the ingress of ion beam impurities, regarding a bucket type ion source device where the thermal filament is used as an ion emission source.

**CONSTITUTION:** A lid plate 8 is fitted via an electrical insulator 19 to the opening of an arc chamber enclosure 1 connected to the positive electrode of an arc power supply 13 for direct current discharge at the side faced to an ion beam takeout electrode group 4, thereby isolating electrically the lid plate 8 from the enclosure 1. Also, there is provided a spatter restraining power supply (potential fixing device) 21 between the negative electrode of an arc power supply 13 and the lid plate 8, so as to keep the lid plate 8 at a potential lower than the plasma potential in the enclosure 1, but higher than the cathode potential of the negative electrode of the arc power supply 13.



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